TIKHONOV, B.; SHIPOV, I.

Automatic pilot. IUn.tekh. 6 no.11:33-38 N '61. (MIRA 14:11)
(Space vehicles--Guidance systems)

TIKHONOV, B.; SHIPOV, I.

Assembling space stations in orbit. IUn.tekh. 6 no.12:26-31 D '61. (MIRA 14:12)

(Orbital rendezvous (Space flight))

TIKHONOV, B.A., inzh.; DUBATOV, A.A., inzh.

Efficient vacuum conditions of PT-50-130 and PT-50-90 turbines.
Energetik 14 no.1:17-18 Ja '66. (MIRA 18:1)

CHERPAKOV, V.P.; TIKHONOV, B.A.

Two-cycle curriculum for the students' workshops at the Velikiye Luki Pedagogical Institute. Uch. zap. Velikoluk. gos. ped. inst. no.16:58-61 '61. (MIRA 16:7)

(Manual training)

TIKHONOV, B.V., inzh.; ZHILKIN, N.I., inzh.

Study of the effectiveness of the modernization of the PT-25-90/13 turbine. Elek. sta. 36 no.10:40-43 O '65. (MIRA 18.10)

TIKHONOV B. I.
p. 2, 3

SOV/77-4-2-15/18

23(4) 23 (5)

AUTHOR: Lyalikov, K.S.

TITLE: Successes of Soviet Electrophotography (Uspekhi sovetskoy elektrofotografii) A Scientific and Technical Conference on Questions of Electrography (Nauchno-tekhnicheskaya konferentsiya po voprosam elektrografii)

PERIODICAL: Zhurnal nauchnoy i prikladnoy fotografii i kinematografii, 1959, Vol 4, Nr 2, pp 149-152 (USSR)

ABSTRACT: This is an account of a scientific and technical con-
ference on electrography, the first to be held in the
Soviet Union and evidently in the world. It was organ-
ized in Vil'nyus on December 16-19, 1958 by the Soviet
narodnogo khozyaystva Litovskoy SSR (Council for
National Economy of the Lithuanian SSR), the Gosudarst-
vennyy nauchno-tekhnicheskiy komitet Soveta ministrov
Litovskoy SSR (State Scientific and Technical Committee
of the Council of Ministers of the Lithuanian SSR) and
the Nauchno-issledovatel'skiy institut elektrografii
(Scientific Research Institute of Electrography).
The conference, attended by over 300 scientific wor-
kers, was opened by the Deputy Chairman of the Council
for National Economy of the Lithuanian SSR P.A.
Kul'vets, after which the director of the Institute
for Electrography, I.I.Zhilevich, reviewed the state
and prospects for development of electrography in the
USSR. He stated that research in this field should be
carried out along the following lines: a) a search
for new photo-active materials with high dark resitance;
b) physical research into the internal photoeffect;
c) development of photosemiconductor layers; d) de-
velopment of the theory of the electrophotographic
process. K.S. Lyalikov (speaking also for O.G. Popova)
gave a report in which he suggested determining the
light sensitivity of electrophotographic layers in GOST
units. N.Z. Plavina (speaking also for I.I.Zhilevich,
L.I.Kryun'ko, ...Markevich, B.I. Kalinauskens and O.K.
Suveyzdis) reported on some research on the sensitization
of a semiconductor in electrophotographic layers. V.M.
Fridkin gave a report on highly sensitive electrophoto-
graphic layers and an electrophotocopying device, and
reviewed the formation process of the latent electro-
photographic image on the basis of the zonal theory.
He also described the design of an electrosensitometer
for determining sensitivity by the relaxation period of
a charge on the surface of the layer, and the circuit
of an electrophotographic copying device. Anfilov
finished describing the latter and then spoke on the
mechanics and kinetics of the development of the latent
electrophotographic image in liquid developers.

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SOV/77-4-2-15/18

Successes of Soviet Electrophotography; A Scientific and Technical Conference on Questions of Electrography

K.M. Vinogradov described some of the features of the cascade and liquid methods of electrophotographic development. Yu.Ye. Karpeshko devoted his report to the criterion of light sensitivity of the elctrophotographic process. After the reports, a discussion took place on methods of determining the light sensitivity of electrophotographic layers. A.N. Chernyshev spoke on the prospects of developing polygraphic processes using electric and magnetic forces. O.V. Gromov (speaking also for I.I. Zhilevich, A.A. Sukhiy, V.A. Gordeyeva, A.S. Pauzha and Yu. I. Kevalaytis) reported on the development of elctrophotographic reproducing equipment. A.S. Pauzha (speaking also for I.I. Zhilevich, A.S. Borisovich, N.M. Gal'vidiks and M.I. Rautkauskas) reported on the use of electrographic methods in recording oscillographs and other recording instruments. V.P. Yurchenko (speaking also for L.N. Balin) spoke on the possibility of electrophotographically recording images from electron-beam tubes. L.S. Korol' (speaking also for M.M. Markevich, T.I. Kozlovskaya, B.I. Kalinauskene, M.K. Haynens, I.I. Zhilevich and K.A. Montrimas) gave a detailed description of laboratory and machine methods of producing photosemiconductor papers (zinc oxide was used). A.A. Sukhiy (speaking also for I.I. Zhilevich, O.V. Gromov, V.A. Gordeyev, N.V. Fedotov and T.N. Ger) described a laboratory and industrial machine for producing photosemiconductor papers. T.A. Shishkina (speaking also for Ya.A. Oknain) reported on a method of examining electrophotographic materials using an a/c bridge. S.I. Khotyanovich (speaking also for A.I. Gikens and I.S. Shileykens) spoke on developing materials for electrophotography and ferromagnitography, including developers giving a "reverse" image. B.I. Tikhonov reviewed methods of measuring the electrostatic potentials of electrophotographic layers, stressing that the oscillating electrode should not be placed above a layer with varying potential as this causes self-discharge. E.V. Krukovskis (speaking also for R.S. Yorevcy, A.A. Osipov and Ye. S. Kheyfets) spoke on the practice of producing velveteen papers in an electrostatic field, and showed samples produced by the Grigishskaya paper factory. Ye.L. Nemirovskiy then gave a historical review of the development of electrographic methods in which he paid tribute to the work of the Scientific Research Institute of Electrography in Vil'nyus and the Institut poligraficheskogo mashinostroyeniya (Moskva)-(Polygraphic Machine-Building Institute (Moscow)). Debates were then held

Card 6/10

on methods of measuring the potential of charged electrophotographic layers; the vibration pick-up most-used was shown in B.I. Tikhonov's report to be not always accurate. S.G.Grenishin stated that the bad influence of the oscillating electrode can be eliminated if the electrode probe above its surface is fixed and the pick-up is connected to it by a shielded cable. In the debate on Ye.L. Nemirovskiy's report it was stated that the research of Academicians A.N. Terenin and Ye.K. Putseyko should be considered as the basis of all work on electrophotographic papers with ZnO, as they were the first to show the possibility of optical sensitization of the internal photoeffect in ZnO. N.M.Gol'vidis then gave a report on the depositing of charges by a corona discharge. A.I. Kaminskas and A.P. Yagulis reviewed some of the results of the use of electrographic methods in radiography. L.I. Nyun'ko (speaking also for I.I. Zhilevich, I.Z. Plavin, Yu.K. Vishchakas and Yu.A.Zibuts) reported on relaxation processes in semiconductor layers, using a vibration electrometer. Yu.K.Vishakas gave a report on research on some physical properties of the polycrystalline layers of selenious cadmium. M.P. Mikalkyavichyus spoke on some of the photoelectric properties of Sb_2S_3 and Sb_2Se_3: the absorption maximum of the latter is about 900 mμ. S.M. Heyman reported on methods of obtaining selenium light-sensitive layers, including sublimation and thermal treatment; it was also found that the sensitivity of the layers increased after storage for 1.5 to 2 months at room temperature. P.M. Podvigalkin (speaking also for S.G.Grenishin) spoke on research into the electrical properties of electrophotographic layers of amorphous selenium and powdered zinc oxide. N.K. Shiktorov (speaking also for A.S. Tauraytis) discussed the production of selenium layers and some of their properties. Finally the following reports on ferromagnetography were delivered; 1) S.Ya. Kaznacheyev, V.M.Zhogina, "Electrodeposition of Magneto-Hard Alloys with Given Magnetic Characteristics" 2) M.P.Arutyunov, "Visualization of Magnetic Oscillograms by the Ferrographic Method" 3) V.P.Patrunov, "Ferrographic Recording of Facsimile Images" 4) I.I.Zhilevich, I.I. Gikis, S. Ye. Buchek, I.I. Saynise, A.K.Kishis, "Mock Experiments in Non-Pressure Ferromagnetic Printing". There was also an exhibition showing the work of the Electrographic Institute. The most important conclusion of the conference was that a solid approach had been made to the possibility of wide technical use of the methods of electrography. It was considered that although work in this field actually started only in 1955-56 it has covered as much ground as the USA in 10 years. While admitting that it was easier to reproduce results already achieved than to be the first to arrive at them, the conference observed that the Americans took good care that no important information appeared in the literature available.

Card 10/10

30632
S/103/62/023/006/005/012
D230/D308

6.9411

AUTHOR: Tikhonov, B.I. (Moscow)

TITLE: Overshoot characteristics of normal noise

PERIODICAL: Avtomatika i telemekhanika, v. 23, no. 6, 1962, 761-768

TEXT: Experimental results of three types of normal stationary low-frequency noise are given: (i) overshoot number distribution in a device with a finite time interval, and for various mean level values, (ii) distribution of overshoot duration at various amplitude levels and separation of intercepts at these levels, (iii) distribution of random maximum values and depths for a number of time interval values. The experimental work consisted of analyzing normal stationary l.f. fluctuation noise at the output of three different amplifiers. Functions defining approximately the spectral densities of this noise are given. The experimental results show that (i) as the relative noise level increases the density distribution for the overshoot duration gradually approaches an exponential

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Overshoot characteristic ...

function, (ii) as the level increases the mean overshoot duration and the root mean square value decrease. In all cases discussed the density distribution curves for the largest values of normal noise are seen to be symmetrical about a mean value, thus obeying a normal law. Density distribution of overshoot depths shows that all curves follow the Rayleigh density distribution; in the three cases considered the most probable value of density distribution occurs when the ratio of these amplitudes to those of r.m.s. noise is 0.5 approximately. Gradual decrease in noise spectrum with increasing frequency corresponds to higher probability density distribution and to its more rapid decrease. Comparison of the theoretical with experimental results is limited to a mean overshoot number and to overshoot distribution as a function of its width for various levels; good agreement is obtained in most cases. Differences are mainly due to the inherent practical difficulty of obtaining noise with spectral densities closely approximating the theoretical functions. There are 3 tables and 7 figures.

SUBMITTED: November 4, 1961

Card 2/2

TIKHONOV, B.I.

KUZNETSOV, P.I.(Moskva); STRATONOVICH, R.L.(Moskva); TIKHONOV, B.I., (Moskva)

Transmission of some random functions trhough linear systems. Avtom. i telem. 14 no.2:143-163 Mr-Ap '53. (MLRA 10:3)
(Automatic control)

TIKHONOV, B.B.

Regulating temperature in buildings heated by continuous gas furnaces.
Gaz. prom. no.10:29-31 O '58. (MIRA 11:11)
(Gas--Heating and cooking)

TIKHONOV, B.S., Cand Tech Sci -- (diss) "Thermoregul ting and protective automatics for the gas heating furnaces of continuous action." Mos, 1959. 16 pp (Academy of Communal Economy im K.D. Pamfilov). 150 copies (KL, 39-59, 105)

60

TIKHONOV, B.S.

Automatic safety device for continuous gas-fired heating furnaces.
Gaz.prom. 4 no.8:26-29 Ag '59. (MIRA 12:11)
(Furnaces--Safety measures)

TIKHONOV, B.S.

Calculation and design of sensing elements for the protective devices of gas-fired heating furnaces. Gaz.prom. 6 no.4:20-24 '61. (MIRA 14:3)

(Furnaces, Heating) (Automatic control)

KUTNIK, S.Ye.; SOSNIN, Yu.P.; TIKHONOV, B.S.

Improved electromagnetic valve. Gaz.prom. 6 no.7:16-17 '61.
(MIRA 17:2)

CHERTAVSKIKH, A.K., kand.tekhn.nauk; TIKHONOV, B.S., kand.tekhn.nauk; KATASONOVA, V.P., inzh.

Bell-type and shaft furnaces for the annealing of sheet and strip. TSvet. met. 34 no. 4:61-65 Ap '61. (MIRA 14:4)
(Furnaces, Heat-treating) (Annealing of metals)

TIKHONOV, B.S.

Conversion of heating furnaces to a continuous gas-fired heating. Gaz.prom. no.5:18-20 '63. (MIRA 16:6)
(Furnaces, Heating) (Gas, Natural)

VOLKOV, Mikhail Aleksandrovich; KOROTEYEV, Tikhon Il'ich; TIKHONOV, B.S., red.

[Operating gas fired boiler installations] Ekspluatatsiia kotel'nykh ustanovok na gazoobraznom toplive. Moskva, Stroiizdat, 1965. 171 p. (MIRA 18:8)

CHERTAVSKIKH, A.K.; TIKHONOV, B.S.; NAUMKINA, I.V.; NIKITIN, V.I.

Nonoxidizing annealing of OTsS4-4-2,5 bronze in endothermal gas. Trudy Giprotsvetmetobrabotka no.24:307-313 '65. (MIRA 18:11)

Tikhonov, B.S.

KOCHETOV, D.P.; TIKHONOV, B.S.

A method for measuring the height of spikes in an electrocardiogram. Biul.eksp.biol.i med. 43 no.1 supplement:63-64 '57. (MLRA 10:3)

1. Iz kafedry kozhno-venericheskikh bolezney Gor'kovskogo gusudarstvennogo meditsinskogo instituta imeni S.M.Kirova i Gor'kovskogo nauchno-issledovatel'skogo kozhno-venerologicheskogo instituta (dir. - prof. M.P.Batunin. Predstavlena deystvitel'nym chlenom AMN SSSR prof. V.N.Chernigovskim.

(ELECTROCARDIOGRAPHY
measurement of spikes on electrocardiogram, method)

TIKHONOV, B. S., Cand Tech Sci -- (diss) "Research into hot and cold rolling of zinc." Moscow, 1960. 14 pp; (Ministry of Higher and Secondary Specialist Education RSFSR, Krasnodar Inst of Non-ferrous Metals im ... I. Kalinin); 150 copies; price not given; (KL, 21-60, 126)

S/136/60/000/08/005/008
E193/E183

AUTHOR: Tikhonov, B.S.

TITLE: Rational Technology of Rolling Zinc

PERIODICAL: Tsvetnyye metally, 1960, 33, No 8, pp 66-70

TEXT: After showing the disadvantages of continuous strip rolling over the pack rolling technique, the present author discusses various problems associated with the changeover from the former to the latter method and the means of achieving both the maximum efficiency of the manufacturing process and high quality of the finished product. To achieve these ends, the metal should be cast into horizontal moulds, since more than twice the quantity of scrap is obtained when billets produced by semi-continuous casting process are used as the starting material. Hot rolling should be carried out on a 4-high mill, the optimum rolling temperature being 150-200 °C. The following rolling schedule is recommended for 95 mm thick billets: 95 - 85 - 75 - 65 - 55 - 40 - 25 - 15 - 9 - 6 (mm), or in terms of reduction per pass; 10.5, 11.8, 13.3, 15.4, 27.0, 37.5, 40, 40, and 33%. The coiled strip should be heated to about 40-50 °C before cold rolling to facilitate uncoiling and to prevent cracking. Cold rolling

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S/136/60/000/08/005/008
E193/E183

Rational Technology of Rolling Zinc

should be carried out in two stages. In the first stage, the metal is rolled on hot (cast iron) rolls and heavy drafts (40-50%) are applied, the recommended rolling schedule for the 6 mm thick strip (rolled on a 2-high mill) being 6 - 4 - 2 mm. The finishing operation is carried out according to the rolling schedule 2 - 1 - 0.5 - 0.3 mm, with the application of both back- and front-tension. An emulsion of 2-4% of acidol emulsifier in water is recommended as a lubricant for hot rolling and first-stage cold rolling operation, a mixture of 4% colophony and 96% kerosene being used in the finishing cold rolling stage. The work was directed by Professor I.L. Perlin.
There are 1 figure, 4 tables and 5 references: 4 Soviet and 1 German.

Card 2/2

LAYNER, D.I.; TIKHONOV, B.S.; KRUPNIKOVA-PERLINA, Ye.I.; AGAFONOVA, A.V.

Investigations in the field of improving service characteristics of zinc for printing purposes. Trudy Giprotsvetmetobrabotka no.20:97-103 '61. (MIRA 15:2)

(Zinc--Metallurgy)

28054
S/136/61/000/009/005/007
E193/E583

18.3200 1416

AUTHORS: Chizhov, S.I. and Tikhonov, B.S.

TITLE: High purity nickel sheet and strip

PERIODICAL: Tsvetnyye metally, 34- no.9, 1961, 78-81

TEXT: In the fabrication of various components in the radio industry nickel sheet and strip of very high purity (99.99-99.95%), low gas content and high density and ductility is required. Even if cathode nickel is used as the starting material, the purity of the finished product falls to 99.8% owing to pick-up of impurities during the conventional melting and working operations. To overcome this difficulty, a process has been developed as described in ГОСТ 849-56 (GOST 849-56) in which strip and sheet are fabricated directly from cathode nickel without melting. This process yielded strip and sheet of 99.99% purity, but low ductility and high gas content caused difficulties during various drawing operations and resulted in a large proportion (up to 95%) of scrap. The present paper describes an improved method developed at the Nauchno-issledovatelskiy institut "Giprotsvetmetobrabotka" (Research Institute "Giprotsvetmetobrabotka"), based on the

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High purity nickel sheet and strip S/136/61/000/009/005/007
E193/E583

application of vacuum-melting. Preliminary experiments under the direction of Candidate of Technical Sciences K. P. Kalinin indicated that vacuum-melted nickel was contaminated with iron and carbon picked up from cast iron moulds. This difficulty was overcome by providing nickel linings for those parts of the moulds on which the stream of molten nickel impinged during the casting operation. All refractory materials used inside the vacuum chamber were preliminarily degassed by high temperature treatment. Carbon was used to deoxidise the melt introduced in the form of a master alloy containing 97-98% Ni and 2-3% C. Cathode nickel (99.99% pure) was used and, to avoid contamination no scrap metal was added to the charge. After melting, the metal was degassed for 20-30 minutes at 1500-1700°C at a residual pressure of 5-8 mm Hg. The mould was preheated to 300-400°C and the metal poured in vacuum at 1700°C at a rate of 8-10 mm/sec. The ingots had a high density and ductility and contained only 0.001-0.008% Si, 0.002-0.015% Fe and 0.001-0.01% Mg, other impurities being the same as in the cathode nickel. The gas content varied between 6 and 16 cm^3/100 g of metal. The 50 x 190 x 300 mm ingots were hot-rolled at 900-1000°C from 50 to

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High purity nickel sheet and strip S/136/61/000/009/005/007
E193/E583

35 mm thickness in one pass. After dressing (1.5-2.5 mm on each side) the slab was hot-rolled at 900-1000°C to 3.5 mm in four passes. The blank was annealed at 750-780°C in a reducing atmosphere (for instance cracked ammonia), cleaned and rolled to 1 mm. The strip was then annealed, cleaned, and rolled down to the final thickness of 0.2-0.4 mm. Final annealing is carried out at 720-750°C in cracked ammonia. This treatment produces material characterized by high ductility which can be reduced cold to more than 90% without cracking. The effect of cold-rolling on the mechanical properties of vacuum-melted and hot-rolled nickel is illustrated in Fig.2 where UTS (σ_B, kg/mm^2, left-hand scale) and elongation (δ,%, right-hand scale) are plotted against the total cold deformation, %. It was concluded that the process described in the present paper can be recommended for production of nickel strip and sheet, meeting the requirements of the radio industry regarding its purity and workability. There are 3 figures, 2 tables and 2 Soviet references.

Card 3/4

S/149/62/000/003/007/011
A006/A101

AUTHORS: Zakharov, M. V., Tikhonov, B. S., Osintsev, O. Ye.

TITLE: High-strength conductive copper alloys without scarce or expensive components

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Tsvetnaya metallurgiya, no. 3, 1962, 122 - 128

TEXT: To select a high-strength conductive copper alloy with good operational properties and without scarce or expensive admixtures, the authors studied the properties of four groups of copper alloys (Cu-Cr-Zr; Cu-Cr-Cd; Cu-Cr-Mg; Cu-Ni-Be and Cu-NiBe+Ti). The composition of the alloys is given (Table 1). The alloys were prepared from charges of electrolytically pure "MO" grade copper and [illegible] ("NO") grade nickel and copper addition-alloys containing Zr, Cd, Mg, Be, Ti and Cr. The manufacture of the alloys is described. Castings, 50 x 60 x 110 mm in size, were hot and cold rolled; the cold rolled specimens were annealed or water quenched. The hardness, electric conductivity, long and short-lasting hardness and mechanical properties at various temperatures of the alloys were measured. With a view to the mechanical, electric and operational properties and the produc-

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tion cost of the alloys investigated, the authors recommend for industrial tests the new conductive chrome-magnesium copper-alloy, containing 0.15 - 0.35% Cr; 0.1 - 0.2% Mg, the rest M0 grade copper. This alloy shows in annealed state at 20°C σ_B as high as 35 - 40 kg/mm^2; δ = 15 - 20%, and at 600°C σ_B = 15 - 16 kg/mm^2 and δ = 19 - 26%. It can well replace the more expensive MI 5A (Mts5A)-type conductive alloys. Highest ultimate strength ($\sigma_{B_{ductility}}$ = 80 and 32 kg/cm^2) is offered by low-conductive alloy 14 showing low ductility at 20 - 600°C. This alloy should be improved by reducing its electric conductivity in annealed state and raising its strength properties. There are 7 tables.

ASSOCIATION: Krasnoyarskiy institut tsvetnykh metallov (Krasnoyarsk Institute of Non-Ferrous Metals). Kafedra metallovedeniya (Department of Metal Science)

SUBMITTED: December 8, 1961

TIKHONOV, Boris Sergeyevich, kand. tekhn. nauk; BAZHENOV, M.F., red.; LUTSKAYA, G.A., red. izd-va; DOBUZHINSKAYA, L.V., tekhn. red.

[Rolling of zinc] Prokatka tsinka. Moskva, Metallurgizdat, 1963. 199 p. (MIRA 16:7)
(Rolling (Metalwork)) (Zinc)

ZAKHAROV, M.V.; PUTSYKIN, G.G.; STEPANOVA, M.V.; TIKHONOV, B.S.; VORONTSOVA, L.A.

High strength copper conductor alloys. Issl. splav. tsvet. met. no.4:239-244 '63. (MIRA 16:8)

(Copper alloys—Electric properties)

L 21206-65 EWT(m)/EWA(d)/EWP(v)/EPR/T/EWP(t)/EWP(z)/EWP(b) Pf-4/Ps-4

ACCESSION NR: AP5000947 [illegible]

AUTHOR: Tikhonov, B.S., Koro'lev, F.V., Korshunskaya, K.N.

TITLE: Sheets and strips of brand 34A solder for soldering aluminum and its alloys

SOURCE: Tsvetnyye metally, no. 12, 1964, 83-85

TOPIC TAGS: aluminum, aluminum solder, aluminum alloy soldering, solder rolling, aluminum soldering, silumin/solder 34A

ABSTRACT: Solder 34A is a common material for soldering aluminum and its alloys but it is difficult to use since it cannot be produced in the form of wire or foil owing to its low ductility. Therefore a method was devised for producing the solder in the form of a three-layer foil which forms a ternary eutectic (6% Si, 28% Cu, 66% Al) on melting. Hypoeutectoid 8% silumin (Si-Al alloy) and highly pure copper (99.99%) were used to produce the 34A solder as a three-ply rolled foil. [illegible] was calculated on the basis of the parameters [illegible] From this calculation, a thickness of 10 mm (12 mm silumin and 1 mm copper) was selected. Good welding together of the two metals during hot rolling was possible only if the contacting surfaces did not oxidize during heating. The copper, which oxidized at

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L 21206-65
ACCESSION NR: AP5000947

100C was covered on both sides with a thin layer of aluminum foil to protect the surface. The packs were preheated to 430-450C, hot rolled on a two-high mill, and reduced 65-70% in the first pass. A microinvestigation of the joint after cold rolling to 0.1 mm demonstrated that the heating and rolling conditions were proper since the weld was strong and the copper layer was not destroyed in spite of up to 98% deformation. The solder had maximum ductility (δ = 21%) after annealing at 300C and holding for 30 min. Orig. art. has: 1 table and 2 figures.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: IE, MT

NO REF SOV: 000 OTHER: 000

Card 2/2

L 37738-66 EWT(m)/EWP(v)/T/EWP(t)/ETI/EWP(k) IJP(c) JD/HM

ACC NR: AP6016334 (N) SOURCE CODE: UR/0149/65/000/006/0106/0113

AUTHORS: Zakharov, M. V. (Professor); Korolev, F. V.; Chizhov, S. I.; Tikhonov, B. S.; Stepanova, M. V.; Sliozberg, S. K.

ORG: Moscow Institute of Steel and Alloys, Chair for the Metallurgy of Nonferrous, Rare, and Radioactive Metals (Moskovskiy institut stali i splavov, Kafedra metallovedeniya tsvetnykh, redkikh i radioaktivnykh metallov)

TITLE: New transmission copper alloys, their alloying principles, properties, and uses

SOURCE: IVUZ. Tsvetnaya metallurgiya, no. 6, 1965, 106-113

TOPIC TAGS: copper alloy, nickel containing alloy, chromium containing alloy / Br.NBT copper alloy, Mts-5A copper alloy

ABSTRACT: The alloying techniques, properties at different temperatures, and stability under contact welding of a number of transmission copper alloys were investigated. The investigation supplements the results of V. M. Glazov, M. V. Stepanova, and M. V. Chuprakova (Izv. AN SSSR, OTN, No. 3, 1962). The experimental results are summarized in graphs and tables (see Fig. 1). It was found that the most thermostable transmission alloys are Mts-5A and Br.NBT, situated on the quasi-binary sections of Cu--Cr_2Zr

UDC: 669.35

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3

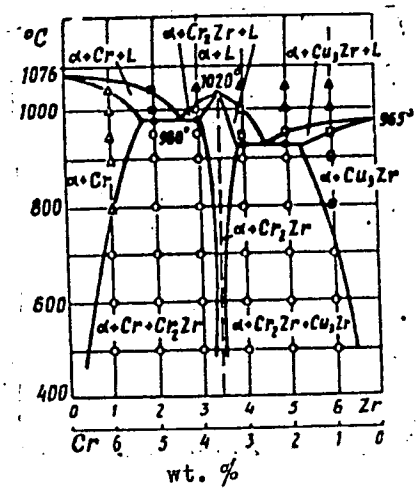


Fig. 1. Polythermic cross section, perpendicular to the quasi-binary section Cu--Cr_2Zr at 93% Cu.

and Cu--NiBe respectively. The most effective thermal treatment of the alloys consists of quenching which results in the formation of a supersaturated solution, followed by cold deformation of 40--60%, and annealing at 0.55 T_{mp} of the alloy. The best alloy for spot welding was found to be the alloy Mts-5A and for seam welding the alloy Br.NBT. Orig. art. has: 3 tables and 6 graphs.

SUB CODE: 11/ SUBM DATE: 25Jun64/ ORIG REF: 005

Card 2/2 vmb

L 32685-66 EWT(m)/EWP(w)/T/EWP(t)/ETI/EWP(k) IJP(c) JD/HW/JG

ACC NR: AP6012729 SOURCE CODE: UR/0136/66/000/004/0074/0076

AUTHOR: Kucherov, V. I.; Zakharov, M. V.; Chizhov, S. I.; Korolev, F. V.; Tikhonov, B. S.; Ryabova, P. S.

ORG: none

TITLE: Mechanical properties of the alloy Br.NBT at various temperatures

SOURCE: Tsvetnyye metally, no 4, 1966, pp 74-76

TOPIC TAGS: beryllium bronze alloy, copper alloy, welding electrode, mechanical property, cold working, metal heat treatment/Br.NBT beryllium bronze alloy, Mts2 copper alloy, Mts3 copper alloy

ABSTRACT: This alloy, produced from the wastes of beryllium bronzes, is designed for use as electrode material for the spot, seam and butt welding of stainless and high-temperature steels with low heat conductivity and high strength. It differs from the Mts3 copper alloys (also used as electrode materials) in that it has a higher content of Ni (1.4-1.6%) and Be (0.2-0.4%) and contains Ti (0.05-0.15%) instead of Mg. The article presents data on the mechanical properties of the Br.NBT at room and elevated temperatures as a function of four different cold and hot working regimes of specimens of this alloy (regime 1 -- semicontinuous casting combined with quenching, tempering

Card 1/2 UDC: 669.35'24'725'295:620.1

L 32685-66

ACC NR: AP6012729

at 500°C, 3 hr; regime 2 -- as above, followed by cold forging to 50% and tempering at 450°C, 3 hr; regime 3 -- semicontinuous casting, hot rolling at 800-900°C with 90% reduction in area, quenching from 900-920°C and tempering at 470°C, 3 hr; regime 4 -- as above, with 80% reduction in area, and with quenching followed by cold rolling with 50% reduction in area and tempering at 430°C, 3 hr). Findings: regimes 3 and 4 appear to be optimal, since then ultimate strength σ_B of the specimens increases by an average of 5-8 kg/mm^2 in the 20-600°C temperature range and is not accompanied by a decrease in the indicators of plasticity; the Br.NBT specimens thus treated acquire a strength (σ_B = ~75 kg/mm^2) that exceeds the strength of Cu-Co-Be, Mts2 and Mts3 alloys at elevated temperatures (σ_B = ~55 kg/mm^2). Its high strength at temperatures as high as 600°C, combined with its moderate electrical conductivity (45-50% of the electrical conductivity of pure annealed copper) and comparatively low cost, make the alloy Br.NBT an excellent material for the electrodes used in the welding of stainless steels and high-temperature alloys. Orig. art. has: 1 figure, 2 tables.

SUB CODE: 11, 13/ SUBM DATE: none/ ORIG REF: 004/ OTH REF: 002

Card 2/2 BLG

TIKHONOV, B.V., kand.tekhn.nauk; YAKOVLEV, Ye.A., inzh.

High-temperature stabilized high-power electric arc (electric-arc plasmotrons). Trudy MAI no.119:43-71 '60. (MIRA 13:11)
(Electric arc) (Plasma (Ionized gases))

TIKHONOV, D.

At new longwalls. Mast.ugl.4 no.11:9-10 N '55. (MLRA 9:2)
(Coal mines and mining)

GOLYANSKIY, Sh.Ts., inzhener; TIKHONOV, D.I., inzhener.

Device for controlling tightening surfaces. Rab.energ. 3 no.5:12-13 My '53. (MLRA 6:5)
(Lathes)

TIKHONOV, D.P.; GRIGOR'YEV, N.V., redaktor; PETROVSKAYA, Ye.K., redaktor; DOTSENKO, A.A., tekhnicheskiy redaktor

[How to build yourself a boat] Kak samomu postroit' lodku. Pod obshchei red. N.V.Grigor'eva. Moskva, Gos. izd-vo "Fizkul'tura i sport," 1955. 21 p. (MLRA 10:3)
(Boatbuilding)

KOLMOGOROV, V.L.; ORLOV, S.I.; SELISHCHEV, K.P.; LEKARENKO, Ye.M. [deceased]; POKROVSKAYA, G.N.; TIKHONOV, D.Ya.; BOGOMOLOV, I.F.

Drawing wire of nonferrous metals and alloys in conditions of fluid friction. TSvet. met. 36 no.12:65-67 D '63. (MIRA 17:2)

TIKHONOV, E.S.

Apparatuses for the fixation of splinters of the lower jaw in the operation of gluing. Vest. khir. 93 no.11:109-110 N '64. (MIRA 18:6)

1. Iz gospital'noy khirurgicheskoy kliniki (zav. - prof. B.P. Kirillov) Ryazanskogo meditsinskogo instituta imeni Pavlova i kafedry khirurgicheskoy stomatologii (zav. - prof. A.I.Yevdokimov) Moskovskogo meditsinskogo stomatologicheskogo instituta.

TIKHONOV, E.S.

Surgical treatment of fractures of the lower jaw, survey of the Soviet and foreign literature. Vest.khir. no.6:104-109 '62. (MIRA 15:11)

1. Iz kafedry khirurgicheskoy stomatologii (zav. - prof. A.I. Yevdokimov) i kafedry gistologii (zav. - prof. L.I. Falin) Moskovskogo meditsinskogo stomatologicheskogo instituta.
(JAWS—FRACTURE)

TIKHONOV, E.S.

Fixation of fractures of the condylicid process with osteoplast. Vest. khir. 91 no.9:106-107 S'63. (MIRA 17:4)

1. Iz kafedry khirurgicheskoy stomatologii (zav.-dotsent S.N. Pravednikov) Kemerovskogo meditsinskogo instituta. Adres avtora: Kemerovo (oblastnoye), Meditsinskiy institut.

TIKHONOV, E. S.

TIKHONOV, E. S.

Issledovanie mineral'nykh krasok i lakov metallicheskogo aviastroeniia. Moskva, 1931. 58 p., illus., tables. (TSAFI. Trudy, no. 88)

Bibliography: p. 56.

Summary in English.

Title tr.: Investigation of mineral paints and dopes used in metal aircraft building.

QA911.M65 no. 88

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955.

PANKOV, V.A.; PLOTNIKOV, N.A.; TIKHONOV, E.S.

Elastic handaging in surgical stomatology. Trudy 1-go MMI 44:43-46 '65. (MIRA 18:12)

1. Stomatologicheskoye otdeleniye (zav.- kand. med. nauk N.A. Plotnikov) Moskovskogo oblastnogo nauchno-issledovatel'skogo instituta imeni M.F. Vladimirskogo (direktor - P.M. Leonenko) i nauchno-issledovatel'skogo instituta instrumental'noy khirurgicheskoy apparatury i instrumentov (direktor - M.G. Anan'yev).

TIKHONOV, G.

Strengthening the unity of workers' action in Latin America. Prof.soiuzy 8 no.7:51-56 Jl '53. (MLRA 6:6)

(Spanish America--Labor and laboring classes)

Translation from: Referativnyy zhurnal. Mekhanika, 1957, Nr 4, p 4 (USSR) SOV/124-57-4-3849

AUTHOR: Tikhonov, G. A.

TITLE: Entropy Diagram for the Determination of the Dielectric Permeability of Moist Air (Entropiynaya diagramma dlya opredeleniya dielektricheskoy pronitsayemosti vlazhnogo vozdukha)

PERIODICAL: Tr. Kazansk. aviats. in-ta, 1955, Vol 29, pp 183-196

ABSTRACT: From the Clausius-Mosotti equation a relationship is obtained for the dielectric permeability ϵ_ϕ of moist air in terms of the characteristic parameters of its state, namely, the pressure, temperature, and moisture content, for specified numerical values of the polarizability of the oxygen, nitrogen, and water vapor. The author constructs an $\epsilon_\phi - S_\phi$ entropy diagram, which affords a means for the rapid determination of ϵ_ϕ for any prescribed set of parameters of state. It is shown that the error of a determination of ϵ_ϕ according to the diagram does not exceed 3%. Bibliography: 9 references.

Yu. G. Zakharov

Card 1/1

29639
S/146/61/004/004/003/015
D209/D306

9.2110 (1153, 1159, 1385)

AUTHOR: Tikhonov, G.A.

TITLE: Capacitive transducer test in a stream of moving air

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Priborostroyeniye, v, 4, no. 4; 1961, 18 - 22

TEXT: The object of the present study is the effect, if any, of the velocity of moving medium on the transducer capacitance. The flow of air up to 0.4 kg/sec at the pressure of 0.5 atm. was obtained with the aid of an air compressor. The air was forced into a system of pipes through throttling units and a flowmeter. The air pressure at the transducer and the differential pressure across the flowmeter were measured by means of a piezometer. A thermocouple potentiometer measured the air temperature at the transducer and at the input to the flowmeter. The humidity of the incoming air into the compressor was measured by means of a psychrometer. A capacitance bridge was used to measure the transducer capacity. The transducer consisted of three nickel-plated steel concentric cylinders X

Card 1/2

Capacitive transducer test in a ...

placed in a fourth cylinder. This arrangement provided 3 cylindrical capacitors connected in parallel. The capacity of the transducer was 241.8 pF at t = 17.4°C, P = 1.018 atm, φ = 71 %. The velocity of air was varied by adjusting a throttling valve at the outlet of the system. First the effect of the pressure alone of the moving air on the transducer capacitance was measured. In order to study the effect of temperature on the capacitance the air was heated from 18°C to 110°C and the air allowed to flow freely. The temperature was measured both at the entrance and the outlet of the transducer. The air humidity was measured with the psychrometer. Graphs of the results of the above measurements are given. It is concluded that: a) The moving air has the same dielectric properties as stationary air. b) The transducer capacitance changes with pressure according to the law which holds good for stationary gases. This article was recommended by the Kafedra matematicheskikh schetnc reshayushchikh priborov (Department of Mathematical Computers). There are 6 figures and 4 Soviet-bloc references.

ASSOCIATION: Izhevskiy mekhanicheskiy institut (Izhevskiy Institute of Mechanics)

SUBMITTED: January 31, 1961

Card 2/2

TIKHONOV, G.A., dots., red.; ALEKSEYEVA, Ye.N., red.; VORONTSOVA, Z.Z., tekhn. red.

[Automatic metering and control devices] Avtomaticheskie ustroistva ucheta i kontrolia; sbornik statei. Izhevsk, Udmurtskoe knizhnoe izd-vo, 1963. 43 p. (MIRA 17:3)

Tikhonov, G. F. "The Kazan State Stomatological Institute, on the 30th anniversary of the Great October Socialist Revolution," Trudy Kazansk. gos. stomatol. in-ta, Issue 2, 1949 p. 3-12

SO: U-5240, 17 Dec. 53, (Letopis 'Zhurnal 'nykh Statey, No. 25, 1949).

TIKHONOV, G.F., dotsent

Outlook for the studies of Kazan stomatologists for the period 1966 - 1970. Vop. obshchei stom. 17:129-132 '64.
(MIRA 18:11)

GASIMOV, F.G.; TIKHONOV, G.F.

Treatment of the oral cavity in children carried out by students during their practice period of vocational training. Nauch. trudy Kaz. gos. med. inst. 14:17-18 '64. (MIRA 18:9)

1. Kafedra terapevticheskoy stomatologii (zav. - dotsent G.D. Ovrutskiy) Kazanskogo meditsinskogo instituta.

TIKHONOV, G.F.:

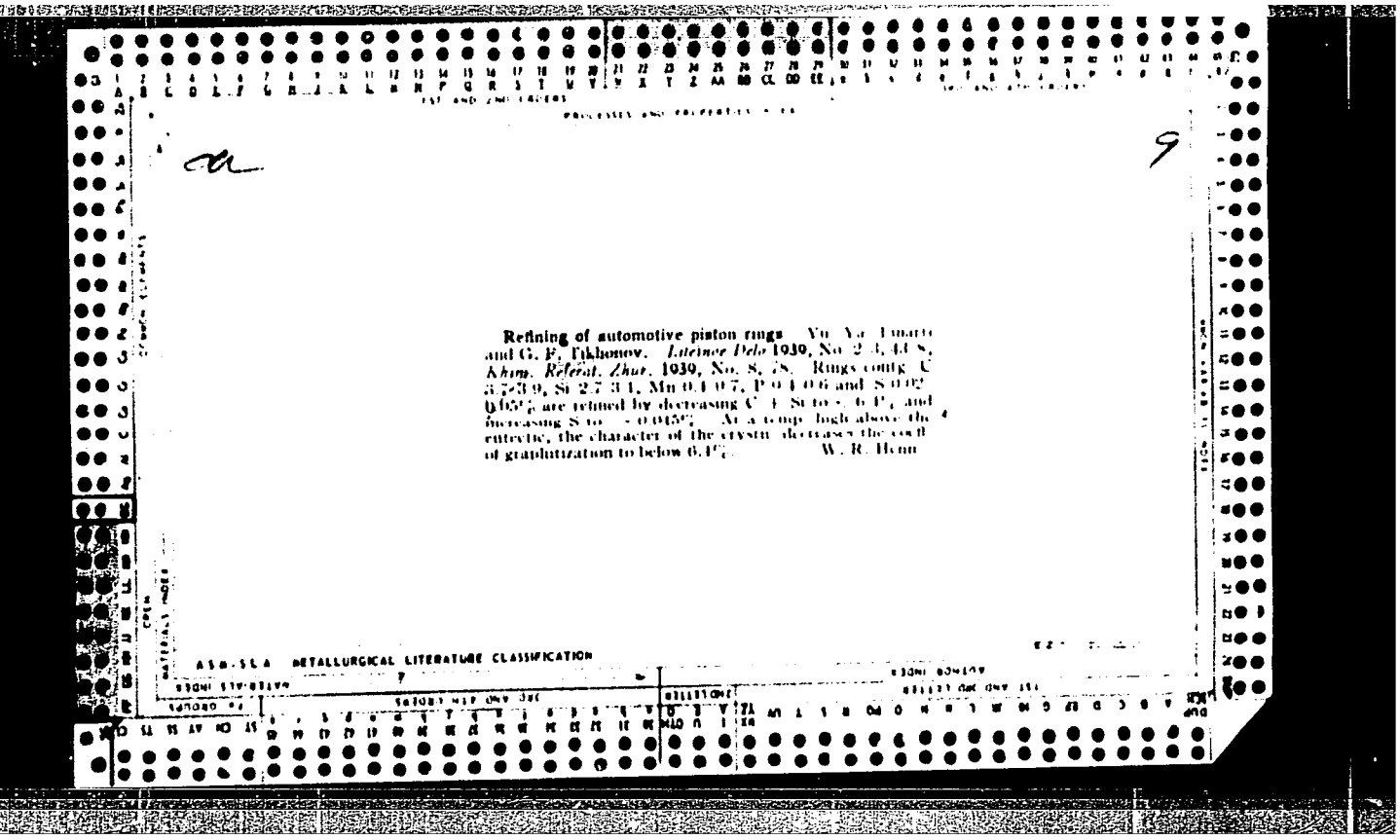
TIKHONOV, G.F.: "On the connection between the pancreas and the secretory functions of the stomach". Kazan', 1955. Kazan' State Medical Inst. (Dissertations for the Degree of Candidate of Medical Sciences.)

So. Knizhnaya letopis. No. 49, 3 December 1955. Moscow.

OVRUTSKIY, G.D.; TIKHONOV, G.F.

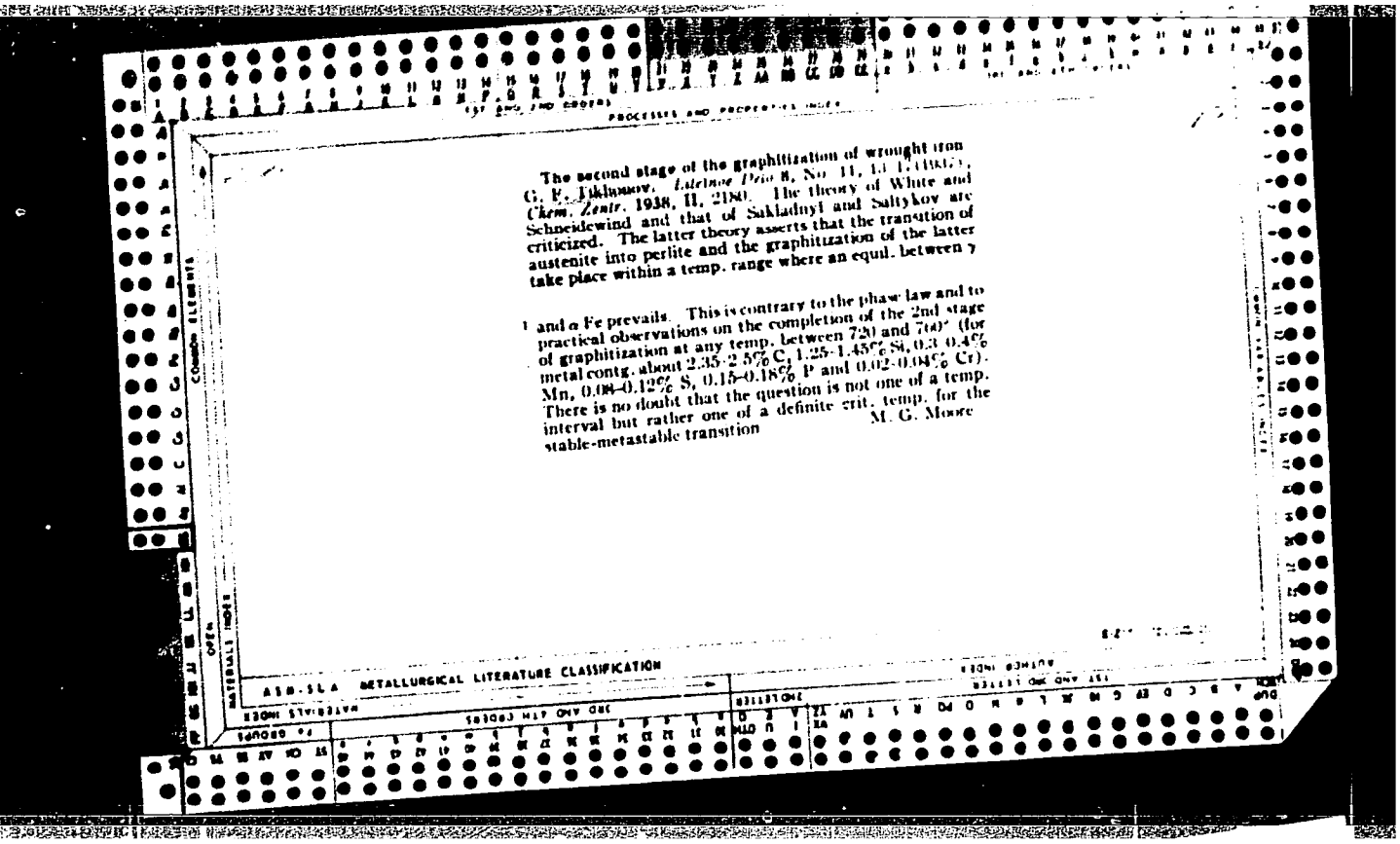
Results of organizing and conducting a single hygienic treatment of the oral cavity in children. Stomatologiia 42 no.3:84-85 My-Je '63 (MIRA 17:1)

1. Iz kafedry terapevticheskoy stomatologii (zav. - kand. med. nauk G.D. Ovrutskiy) Kazanskogo meditsinskogo instituta.



Refining of automotive piston rings. Yu. Ya. Tomarov and G. F. Tikhonov. *Liteinoe Delo* **1939**, No. 2-3, 41-8; *Khim. Referat. Zhur.* **1939**, No. 8, 78. Rings contg. C 3.73-3.9, Si 2.7-3.1, Mn 0.4-0.7, P 0.4-0.6 and S 0.07-0.05% are refined by decreasing C + Si to 5.6-5.7, and increasing S to 0.045%. At a temp. high above the eutectic, the character of the crystn. decreases the coeff. of graphitization to below 0.4%. W. R. Hess

A.S.M.-S.L.A. METALLURGICAL LITERATURE CLASSIFICATION



The second stage of the graphitization of wrought iron
G. F. Likhtman, *Zavodskaya Lab.* 8, No. 11, 1311(1939);
Chem. Zentr. 1938, II, 2180. The theory of White and
Schneidewind and that of Sakladnyi and Saltykov are
criticized. The latter theory asserts that the transition of
austenite into perlite and the graphitization of the latter
take place within a temp. range where an equil. between γ

and α Fe prevails. This is contrary to the phase law and to
practical observations on the completion of the 2nd stage
of graphitization at any temp. between 720 and 760° (for
metal contg. about 2.35–2.5% C, 1.25–1.45% Si, 0.3–0.4%
Mn, 0.08–0.12% S, 0.15–0.18% P and 0.02–0.04% Cr).
There is no doubt that the question is not one of a temp.
interval but rather one of a definite crit. temp. for the
stable-metastable transition

M. G. Moore

67416
SOV/123-59-12-46681

18.7100
Translation from: Referativnyy zhurnal. Mashinostroyeniye, 1959, Nr 12, p 108 (USSR)

AUTHOR: Tikhonov, G.F.

TITLE: The Effects of Hardening on the Rate of Second Phase Graphitization of Wrought Cast Iron

PERIODICAL: Tr. Gor'kovsk. politekhn. in-ta, 1958, Vol 14, Nr 4, pp 46-50

ABSTRACT: The author points out that hardening of cast iron of austenite-graphite state (after 10 hours annealing at 970°C) at a heating temperature of 900°C creates conditions which favor the formation of numerous new centers of graphite nuclei and thereby, accelerate the second phase of graphitization (according to the authors' data by 4 times). It is assumed that graphite inclusions originate in those regions of the solid iron solution which are saturated with carbon up to the limit. There are many such regions during the hardening process. In heating hardened cast iron, highly dispersed, thermodynamically unstable particles of the carbide phase are segregated from the oversaturated solid solution. Their decomposition yields inclusions of free carbon (graphite), which, if heating continues, become centers of

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67416
SOV/123-59-12-46681

The Effects of Hardening on the Rate of Second Phase Graphitization of Wrought Cast Iron

graphitization. At extensive heating up to 1,000°C, the effect of hardening is taken off, because of the transition of graphite into solution. 4 figures, 5 references.

K.D.A.

Card 2/2

TIKHONOV, G.F., kand. tekhn. nauk, dots.; APAYEV, B.A., kand. fiz.-mat. nauk; RUNOV, V.V., inzh.

Investigating the graphitization of white cast iron by means of the magnetic method. Izv. vys. ucheb. zav.; chern. met. no.4: 147-152 Ap '58. (MIRA 11:6)

1. Gor'kovskiy politekhnicheskiy institut i Gor'kovskiy fiziko-tekhnicheskiy institut.
(Cast iron--Metallography)
(Ferromagnetism)

SOV/137-59-4-9093

Translation from: Referativnyy zhurnal, Metallurgiya, 1959, Nr 4, p 257 (USSR)

AUTHOR: Tikhonov, G.F.

TITLE: The Effect of Quench-Hardening on the Rate of the Second Graphitization Stage of Wrought Iron

PERIODICAL: Tr. Gor'kovsk. politekhn. in-ta, 1958, Vol 14, Nr 4, pp 46 - 50

ABSTRACT: The author investigated the effect of wrought iron quench-hardening at a temperature corresponding to the austenite-graphite state, on the rate of the second graphitization stage. The experiments were carried out with the use of wrought-iron specimens of 16 mm in diameter and of the following composition (in %): C 2.55, Si 1.32, Mn 0.35, S 0.08, P 0.025, and Cr 0.04. The specimens were preliminarily annealed at 970°C for 10 hours to complete fully the first graphitization stage. Then a number of specimens was oil hardened at 900°C (30 minutes). It was established that hardening of iron after the first stage of graphitization furthered the origination of additional graphitization

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The Effect of Quench-Hardening on the Rate of the Second Graphitization Stage of Wrought Iron

centers and sharply reduced the duration of the second stage of graphitization. The presence of free-structure cementite is not necessary for the formation of numerous graphitization centers. Graphite inclusions are forming in those zones of the Fe solid solution which are saturated with C to an extremal degree.

A.B.

Card 2/2

TIKHONOV, G.F.

Determining the critical A_1 point for malleable cast iron. Lit. proizv. no.1:42-43 Ja '59. (MIRA 12:1)
(Cast iron--Metallography) (Phase rule and equilibrium)

APAYEV, B.A.; YAKOVLEV, B.M.; TIKHONOV, G.F.

Effect of silicon on processes of carbide formation and graphitization during the tempering of hardened steel. Fiz. met. i metalloved. 12 no.2:208-216 Ag '61. (MIRA 14:9)

1. Gor'kovskiy issledovatel'skiy fiziko-tekhnicheskiy institut i Gor'kovskiy politekhnicheskiy institut imeni A.A. Zhdanova.
(Steel--Heat treatment)
(Silicon)

TIKHONOV, G.F., kand.tekhn.nauk

Characteristics of cast iron growth. Metalloved. i term. obr. met. no.8:2-6 Ag '62. (MIRA 15:11)

1. Gor'kovskiy politekhnicheskiy institut.
(Cast iron--Metallography)
(Metals, Effect of temperature on)

MADYANOV, A.M., kand. tekhn. nauk, dots.; TIKHONOV, G.F., kand. tekhn. nauk, dots., otv. red.; ZAALISHVILI, Sh.D., doktor khim. nauk, prof., retsenzent; ASTROV, Ye.I., kand. tekhn. nauk, dots., retsenzent; KOZYULINA, R.M., red.

[Principles of the theory of metallurgical processes; manual for students of the department of metallurgy] Osnovy teorii metallurgicheskikh protsessov; uchebnoe posobie dlia studentov metallurgicheskogo fakul'teta. Gor'kii. Pt.2. 1962. 112 p. (MIRA 17:3)

1. Gorkyi. Politekhnicheskiy institut. Kafedra liteynogo proizvodstva.

TIKHONOV, G.F. and RYRYALOV, A.A.

"Thermomechanical treatment of powders for required properties."

TITLE: The Sixth All-Union conference on Powder Metallurgy (Held at Moscow, 21 November 1962

SOURCE: Poroshkovaya metallurgiya, no. 3, 1963. p. 110

TIKHONOV, G.F.; SOROKIN, V.K.; KHROMOV, V.G.

Rolling highly-porous strips for filters of titanium powder. Trudy LPI no.222:71-72 '63. (MIRA 16:7)
(Powder metallurgy) (Rolling (Metalwork))

TIKHONOV, G.P., kand.tekhn.nauk

Investigating the growth of cast iron during repeated heating. Trudy GPI 19 no.1:59 '63. (MIRA 17:9)

ACCESSION NR: AR4018307 S/0137/64/000/001/G034/G034

SOURCE: RZh. Metallurgiya, Abs. 1G238

AUTHOR: Tikhonov, G. F.; Pyeryalov, L. A.

TITLE: Effect of cold deformation and spheroidization on the properties of stainless steel powder

CITED SOURCE: Tr. Gor'kovsk. politekhn. in-ta, v. 19, no. 1, 1963, 51-59

TOPIC TAGS: cold deformation, stainless steel powder, steel powder rolling, powder particle spheroidization

TRANSLATION: Stainless steel powders obtained by reduction are characterized by good rollability and pressability, but their particles have a rough surface which prevents the use of these powders for filters made by rolling. Stainless steel powders can be milled in order to give them a spherical shape. 1Kh18N9T, 1Kh18N15, and 1Kh17N2 steels were milled for 4, 8, 10, and 12 hr. After milling the particles possessed a nearly spherical shape. The most pronounced change in particle shape was displayed by powders of 1Kh18N15 and 1Kh17N2 steels. Bulk density and flow characteristic of the powders increase with milling time. The effect of the size

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ACCESSION NR: AR4018307

and shape of powder particles on the properties of porous materials was studied on specimens made by pressing and rolling powder of 1Kh17N2 steel. The flexibility of the raw strip decreases with increasing milling time and decreasing size of powder particles. This is explained by the fact that the powder particles are work hardened during milling, and their shape becomes close to spherical, resulting in a decrease in contact surface. The permeability of porous materials obtained by rolling the powders is determined by the size and shape of the powder particles and also by porosity of the material. Sintering does not affect the dependence of permeability on particle size, but as the latter decreases, the absolute value of the permeability diminishes markedly owing to increased shrinkage. V. Neshpor

SUB CODE: MM ENCL: 00

Card 2/2

ACCESSION NR: AR4018312 S/0137/64/000/001/G035/G036

SOURCE: RZh. Metallurgiya, Abs. 1G247

AUTHOR: Tikhonov, G. F.; Sorokin, V. K.

TITLE: Study of the sintering of stainless steel

CITED SOURCE: Tr. Kuyby*shevsk. aviats. in-t, vy*p. 16, 1963, 135-140

TOPIC TAGS: stainless steel sintering, titanium steel sintering, steel powder sintering

TRANSLATION: Specimens in the form of a strip (density, 40-45%) prepared by rolling powder of stainless austenitic steel containing various amounts of C and Ti and obtained by the method of joint reduction were sintered at 1200, 1250, and 1300° for 6 hr in very dry H_2. Satisfactory strength was obtained at a sintering temperature of 1250-1300°. Specimens containing excess Ti (0.39-0.64%) had an oxidized surface covered with brown oxides and no ductility. Sintering for 15 hr did not remove the oxides. Specimens containing excess Ti in the amount of 0.15% were weakly oxidized and sintering for 15 hr removed the oxides. Specimens without Ti did not oxidize during sintering. It is apparent that the oxidation of the stainless steel powder

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ACCESSION NR: AR4018312

during sintering is caused by the presence of free Ti which did not enter into the γ-solution in the course of producing an alloyed powder. To prevent the oxidation of the stainless steel, it is necessary to use powders without Ti, or with a calculated ratio of C to Ti. In order to improve the sintering capability of stainless steel, the authors added Cu (1-3%). The introduction of 2-3% Cu increased strength from 11.6-11.9 to 13.0-14.8 kg/cm^2. V. Miroshnikov

SUB CODE: MM ENCL: 00

Card

ACCESSION NR: AT4012722 S/2981/63/000/002/0119/0129

AUTHOR: Onopriyenko, V. A.; Khromov, V. G.; Romanova, L. S.; Tikhonov, G. F.

TITLE: Direct rolling of aluminum powder sheets

SOURCE: Alyuminiyevy*ye splavy*. Sbornik statey, no. 2. Spechenny*ye splavy*. Moscow, 1963, 119-129

TOPIC TAGS: powder metallurgy, aluminum, aluminum powder, sheet rolling, aluminum sheet

ABSTRACT: In both Russian and Western publications, the problem of rolling ferrous and non-ferrous powders has often been investigated, but no papers have dealt with the rolling of aluminum powder. In the present paper, the authors demonstrate the possibility of manufacturing sheets of foil made of SAP (sintered aluminum powder) by directly rolling the powder. Under these conditions, rolling of high-quality sheets requires a certain grain size of the grade APS powder. Rolling may be both cold or hot (at 300-320C), but the strips made of heated powder are stronger. A flow process has been designed for manufacturing foil made of SAP by simple rolling. Samples have been made with a thickness of 1 to 0.05 mm. The influence of the degree of deformation and of annealing on the ultimate strength, as well as on the density and hardness, was determined.

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ACCESSION NR: AT4012722

For degrees of deformation exceeding 50%, there was a decrease in these mechanical properties. The ultimate strength of 0.06 mm rolled sheet was 36-42 kg/mm^2 at 20C and 7-9 kg/mm^2 at 480C. "N. N. Kashirin, N. A. Malekhanov, M. A. Moiseyev, Ye. A. Petrov, B. A. Borok, A. P. Malin and A. N. Potapov also took part in the work." Orig. art. has: 14 figures and 2 tables.

ASSOCIATION: none

SUBMITTED: 00 DATE ACQ: 13Feb64 ENCL: 00

SUB CODE: MM NO REF SOV: 001 OTHER: 000

Card 2/2

ACCESSION NR: AR4018315 S/0137/64/000/001/G037/G037

SOURCE: RZh. Metallurgiya, Abs. 1G265

AUTHOR: Tikhonov, G. F.; Sivov, A. V.; Pyatyalov, L. A.

TITLE: Effect of the particle size of 1Kh18N9T steel powder on its properties

CITED SOURCE: Tr. Gor'kovsk. politekhn. in-ta, v. 19, no. 1, 1963, 42-50

TOPIC TAGS: steel powder, steel powder flow, steel powder particle size

TRANSLATION: A study was made of the effect of the particle size on the properties of reduced powder with composition (in %): C 0.11; Si 0.12; P 0.002; S 0.011; Cr 18.77; Ni 10.45; Ti 0.51; Mn, trace. Bulk density of the powder varies between 1.49 and 2.59 g/cm^3 and flow characteristic varies from 0.46 to 1.58 g/sec. The results of a study of the bulk density versus particle size of a mixture of three powder fractions are represented in the form of a three-dimensional diagram plotted on the basis of a concentration triangle. For the reduced powder, bulk density decreases with increasing content of coarse fraction in the mixture. The opposite dependence is observed in pulverized and atomized powders. Analysis of the relationships discovered in the change of bulk density with flow characteristic showed

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ACCESSION NR: AR4018315

that these quantities depend only on the amount of coarse and fine fractions present in the mixture. The authors recommend the use of the concentration-triangle principle in calculating density ratio and flow characteristic of powder mixtures.
V. Miroshnikov

SUB CODE: MM ENCL: 00

Card 2/2

L 44016-66 EWP(e)/EWT(m)/T/EWP(t)/ETI/EWP(k) IJP(c) JD/WW/HW/JG/WH

ACC NR: AT6014272 (A) SOURCE CODE: UR/3063/64/020/001/0056/0063

AUTHOR: Tikhonov, G. F. (Candidate of technical sciences, Docent)

ORG: none

TITLE: Cermet sheets

SOURCE: Gorkiy. Politekhnicheskiy institut. Trudy, v. 20, no. 1, 1964. Trudy po mashinostroyeniyu i metallurgii (Papers on machinery manufacture and metallurgy), 56-63

TOPIC TAGS: cermet product, powder metallurgy, powder metal compaction, powder metal property, rolling mill, cold rolling, sheet metal ~~mathematic analysis, applied mathematics~~

ABSTRACT: Analysis of available data on the production of sheet metal from various cermet materials showed it is possible, from existing theoretical principles on the rolling of metal powders, to scientifically resolve the technological problems in the preparation of compact or porous sheets. From available formulas and test data it is possible to calculate the basic parameters for the construction of rolling mills and to select conditions for rolling the powders. The problem of producing strips and sheets by rolling powders of different metals and alloys has

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ACC NR: AT6014272

been worked out scientifically and practically to such a level that it can be recommended for commercial use. Orig. art. has: 4 tables, 8 equations and 2 figures.

SUB CODE: 11, 13/ SUBM DATE: none/ ORIG REF: 009

Card 2/2 LC

L 2850-66 EWT(m)/EWP(t)/EWP(k)/EWP(b)/EWA(c) IJP(c) JD/HW

ACCESSION NR: AT5022889 UR/2776/65/000/043/0060/0068

AUTHOR: Malin, A. P.; Khromov, V. G.; Tikhonov, G. F.; Suchkov, A. B.

TITLE: Production of high-purity sheets and strips by means of the direct rolling of electrolytic titanium powder

SOURCE: Moscow. Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii. Sbornik trudov, no. 43, 1965. Poroshkovaya metallurgiya (Powder metallurgy), 60-68

TOPIC TAGS: titanium, metal powder, metal rolling, rolling mill, cold rolling, annealing

ABSTRACT: The authors present the results of an experimental investigation of the direct rolling of the powder of electrolytically refined titanium at a laboratory rolling mill in the Gor'kiy Polytechnic Institute (roll diameters, 180 and 350 mm, roll-barrel length, 150-330 mm; RPM, 1-8) and at an industrial-type rolling mill in the TsNIIChM (Central Scientific Research Institute of Ferrous Metallurgy) (roll diameters, 600 and 900 mm; barrel length, 630 mm; RPM, 1.25 to 4.7). Four batches of powdered titanium were used: 1) screened coarse fraction,

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1.6 + 1.0 mm; 2) mixture of fractions to 1.6 mm; 3) screened medium fraction, 1.0 + 0.63 mm; 4) screened fine fraction, 0.4 + 0.315 mm. Quality strip could be rolled from the coarse-grained powder (fractions 1.6 + 1.0 mm) only in the mill with rolls of a diameter of at least 600 mm, which is in agreement with the theory that strip thickness is directly proportional to roll diameter. In experiments with the further processing of strip the best results were produced by the variant with 20% deformation, which involves a large number of sinterings in an argon atmosphere, which serves to eliminate H_2, Mg, and other impurities. Strip rolled from electrolytic titanium displays high plastic properties which make it amenable to final processing by means of cold deformation (e.g. deep drawing). The techniques thus developed dispense with the need for hot working (and hence also for cold working and pickling of sheets) and reduce the percentage of wastes to 10% of the weight of raw powder used. The following industrial sequence of operations can thus be recommended: 1. Screening of powder. Use of the fraction 1.6 + 1.0 mm for rolling; 2. Rolling of 7 mm thick, 600 mm wide strip in TsNIIChM mill with roll diameters 600/900 mm; 3. Cutting of strip into sections measuring 120x350 mm; 4. Processing of strip by means of 6 cycles "sintering in argon (1200°C, 3 hr) - cold rolling," with roughing after each cycle until strip thickness is reduced to 1.4-0.8 mm; 5. Vacuum annealing of 0.8 mm thick

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at 900°C for 2 hr; 6. Cold rolling to 0.4 mm (6 passes); 7. Vacuum annealing at 700°C for 2 hr (in coil); 8. Cold rolling to 0.2 mm; 9. Vacuum annealing at 700°C for 2 hr (in coil); 10. Cold rolling to 0.1 mm; 11. Vacuum annealing at 700°C for 2 hr (in coil); 12. Cold rolling to 0.05 mm; 13. Vacuum annealing at 700°C for 2 hr (in coil). The thus obtained strip has a polyhedral structure. Orig. art. has: 6 figures, 3 tables.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: MM.

NO REF SOV: 007 OTHER: 001

Pure metal

BVK
Card 3/3

BOROK, B.A.; MALIN, A.P.; MARKELOV, V.V.; ANDREYEV, P.S.; KUTYRINA, V.M.; LOGINOV, A.A.; GROSVAL'D, V.G.; AKSENOV, G.I.; KHROMOV, V.G.; TIKHONOV, G.F.

Experimental powder rolling on an industrial-type mill. Sbor. trud. TSNIICHM no.43:53-59 '65. (MIRA 18:10)

L 24801-66 EWP(e)/EWT(m)/EWP(w)/EWA(d)/T/EWP(t)/EWP(k) IJP(c) JD/HW

ACC NR: AP6011344 SOURCE CODE: UR/0226/66/000/003/0007/0013

AUTHOR: Tikhonov, G. F.; Pyryalov, L. A.; Chertok, M. M.

ORG: Gor'kiy Polytechnic Institute im. A. A. Zhdanov (Gor'kovskiy politekhnicheskiy institut)

TITLE: Effect of spheroidization on the structure and properties of powder

SOURCE: Poroshkovaya metallurgiya, no. 3, 1966, 7-13

TOPIC TAGS: powder metallurgy, iron powder, stainless steel powder, steel microstructure, cold rolling, spheroidization

ABSTRACT: The effects of spheroidization on the structure and properties of powders were studied using iron powder manufactured by the Sulin Metallurgical Plant and 1Kh17N2, 1Kh18N15, and 1Kh18N9T stainless steel powders obtained by the simultaneous reduction method. To study the effect of spheroidization on the microcrystalline structure of powder, only the 0.200 + 0.160 mm fraction was tumbled. Prior to spheroidization it was annealed for 2 hours at 650C. As a result of tumbling the iron and stainless steel powders approximated the properties of powders of spheroidal particles. The retention of a spongy structure by the powder particles makes them a satisfactory material for rolling and pressing, as a result of which they can be recommended for the manufacture of spongy sintered materials for highly effective use as filters. Orig. art. has: 4 figures and 6 tables. [AM]

SUB CODE: 11, 13, 20/ SUBM DATE: 20Oct65/ ORIG REF: 006/ OTH REF: 002/

Card 1/1

L 46975-66 EWP(k)/EWT(d)/EWT(m)/EWP(h)/T/EWP(1)/EWP(e)/EWP(v)/EWT(...)

ACC NR: AT6024938 IJP(c) JH/JD/HW SOURCE CODE: UR/2981/66/000/004/0259/0263

AUTHOR: Bokova, L. S.; Onopriyenko, V. A.; Tikhonov, G. F.; Khromov, V. G.

ORG: none

TITLE: Rolling of aluminum powder into coiled bands with a compact edge

SOURCE: Alyuminiyevyye splavy, no. 4, 1966. Zharoprochnyye i vysokoprochnyye splavy (Heat resistant and high-strength alloys), 259-263

TOPIC TAGS: aluminum powder, powder metal compaction, metal rolling

ABSTRACT: The study had two objectives: (1) preparation of band billets no less than 10 m long and 1-1.7 mm thick from finely divided aluminum powder which are capable of being coiled up for further rolling into foil, and (2) design and construction of an attachment to the horizontal rolls of a rolling mill for the continuous rolling of aluminum powder into band billets with compact edges. APS-1 aluminum powder containing 6.7-6.9% Al_2O_3, 0.15% Fe, and 0.12% fats was employed. It is shown that band billets approximately 1 mm thick can be rolled with 180 mm rolls only by using a special attachment for controlling the thickness of the band by limiting the angle of contact between the powder and the rolls and the supply of the powder to the rolling zone. The coiling (winding on a drum with a diameter of no less than 225 mm) of band billets 0.8-1.0 mm thick rolled from aluminum powder of fractions -0.1 +0.16, -0.16 +0.1, -0.2 and less was found to be feasible. The mechanical properties of finished

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bands 0.1 mm thick do not depend on the initial thickness of the band billet in the 1.9-0.8 mm range. Hot rolling of the band billet with a total reduction of no less than 50% is necessary prior to the cold rolling of the band. Orig. art. has: 5 figures and 1 table.

SUB CODE: 11/ SUBM DATE: none

Card 2/2

ACC NR: AP6036893 (N) SOURCE CODE: UR/0226/66/000/011/0009/0013

AUTHOR: Tikhonov, G. F.; Pyryalov, L. A.; Sorokin, V. K.

ORG: Gor'kiy Polytechnic Institute im. A. A. Zhdanov (Gor'kovskiy politekhnicheskiy institut)

TITLE: Selection of powders for obtaining present properties of porous materials and pressings

SOURCE: Poroshkovaya metallurgiya, no. 11, 1966, 9-13

TOPIC TAGS: metal powder, porosity, filtration, particle size

ABSTRACT: An experimental analysis was made of the correlation between the porosity, particle size, fineness of filtration filtering and the permeability factor of porous materials. A new formula is derived for determining the permeability factor at a given porosity and particle size of the material. Experimental data are presented for the fineness of filtration. One table showing the correlation of the fineness of filtration with the powder particle size and the powder fraction with fineness of filtration are given. Orig. art. has: 3 formulas and 5 tables. [Based on authors' abstract] [NT]

Card 1/1 SUB CODE: 11/SUBM DATE: 20Oct66/ORIG REF: 008/

VARLAMOV, N.A., inzh.; SHOKHIN, V.N., inzh.; NIKOLENKO, S.V.; TIMAKOV, G.I.

Experience in obtaining iron ore concentrates in a hydrocyclone. Gor. zhur. no.1:75-77 Ja '64. (MIRA 17:3)

1. Magnitogorskiy gornometallurgicheskiy institut (for Varlamov, Shokhin). 2. Gornoye upravleniye Magnitogorskogo metallurgicheskogo kombinata (for Nikolenko, Timakov).

ABUSHKEVICH, P.V.; VAYSBRUD, V.I.; KULIKOV, I.A.; LEV, M.I.; MAZURIN, N.D.; ROZINA-ITSKINA, TS.S.; TIKHONOV, G.I.

Epidemic and etiological nature of the virus influenza epidemic in Khabarovsk in January-March 1959. Vop. virus. 5 no. 6:750 N-D '60. (MIRA 14:4)

(KHABAROVSK--INFLUENZA)

KOGAN, L.A., kandidat tekhnicheskikh nauk; TIKHONOV, G.M., kandidat tekhnicheskikh nauk.

Mechanizing container loading points. Tekh.zhel.dor. 15 no.1: 9-12 Ja-F '56. (MLRA 9:5)
(Railroads--Freight) (Loading and unloading)

TIKHONOV, G. M.

TA 2/49T41

USSR/Engineering
Terminology

Apr 48

"Obstruction of Scientific and Technical Terminology by Foreign Words," G. M. Tikhonov, Cand Tech Sci, 3/4 p

"Telh Zhel Dor" No 4

Subject tendency noted by Lenin as far back as 192C. Some terms are too firmly established to be eradicated, but others are unintelligible and unnecessary. Stresses responsibility of textbook writers.

TA 2/49T41

TIKHONOV, G.V.

Separation of a gas and liquid flow with small concentrations of liquid by means of a cyclone of special design. Trudy LKI no.36:91-100 '62. (MIRA 16:12)

1. Kafedra sudovykh silovykh ustanovok Leningradskogo korablestroitel'nogo instituta.

SPIVAKOVSKIY, A.O.; GONCHAREVICH, I.F., kand. tekhn. nauk; RUBINOVICH, Ye.Ye., inzh., mlad. nauchn. sotr.; TIKHONOV, G.V., inzh., mlad. nauchn. sotr.; KAMNEVA, T.N., red.

[Method of calculating resonance, vibration conveyers and vibration grizzlies with buffers taking into account acting resistances; short scientific report] Metod rascheta rezonansnykh vibrokonveierov i vibrogrokhotov s buferami s uchetom deistvuiushchikh soprotivlenii; kratkii nauchnyi otchet. Moskva, In-t gornogo dela, 1963. 38 p. (MIRA 17:8)

1. Chlen-korrespondent AN SSSR (for Spivakovskiy).

TIKHONOV, German Vasil'yevich, prepodavatel' [deceased]; NECHAYEVA, Ye.G., red.; FEDOTOVA, A.F., tekhn.red.

[Laboratory manual of veterinary parasitology] Laboratorno-prakticheskie zaniatiia po veterinarnoi parazitologii. Moskva, Gos.izd-vo sel'khoz.lit-ry, 1958. 203 p. (MIRA 12:4)

1. Vologodskiy zooveterinarnyy tekhnikum (for Tikhonov).
(Veterinary parasitology--Laboratory manuals)

TIKHONOV, G.V., vetvrach; MANAKOV, N.N., zootekhnik; MATVEYEV, A.A., vet. fel'dsher.

Eliminating fascioliasis and dictyocaulosis from sheep on the stock farm. Veterinariia 35 no.4:49-50 Ap '58. (MIRA 11:3)

1. Vologodskiy veterinarnyy tekhnikum (for Tikhonov). 2. Kolkhoz "Krasnoye znamya" (for Manakov, Matveyev).
(Sheep--Diseases and pests)

TIKHONOV, G.V., veterinarnyy vrach; KRASHENINNIKOV, P.N., veterinarnyy vrach.

Treating dogs for mange. Veterinariia 33 no.12:34-35 D '56. (MLRA 9:12)

1. Vologodskiy veterinarnyy tekhnikum.
(Scabies) (Dogs--Diseases)

TIKHONOV, I., kandidat ekonomicheskikh nauk.

The basic economic law of socialism. (In: Moscow. Finansovaia akademiia. Nauchnye zapiski. Moskva, 1953. p. 3-25).

(MLRA 7:2)

1. Moscow. Finansovaya akademiya.

(Socialism)